C2N-CBD-P/C2N-CBD-P-KP/C2N-CBD-E/C2N-CBF-P/C2N-CBV-P
Cameo® Keypads
Installation & Operation Guide

Description

The Cameo® keypads from Crestron® present a fresh, innovative concept in keypad design, featuring a highly configurable 1-gang wall mount form factor that is at once inviting to the touch and appealing to the eye. The C2N-CBD-P, C2N-CBD-P-KP, C2N-CBD-E, C2N-CBF-P, and C2N-CBV-P easily install alongside other low-voltage in-wall devices to deliver a fully customizable keypad control solution as part of a complete Crestron control system.

The C2N-CBD-P, C2N-CBD-P-KP, C2N-CBD-E, C2N-CBF-P, and C2N-CBV-P are functionally identical. For simplicity within this guide, the term "C2N-CBD/CBF/CBV" is used except where noted.

Specifications

SPECIFICATION	DETAILS
Power Requirements	
Cresnet® Power Usage	1 W (0.05 A @ 24 Vdc)
Environmental	
Temperature	32° F to 113° F (0° C to 45° C)
Humidity	10% to 90% RH (non-condensing)
Heat Dissipation	3.4 Btu/h
Weight	
Standard Mount	3 oz (64 g)
Flush Mount	3 oz (75 g)
Vimar Mount	2 oz (50 g)

Additional Resources

Visit the product page on the Crestron website (www.crestron.com) for additional information and the latest firmware updates.

C2N-CBD-P/ C2N-CBD-P-KP *C2N-CBD-E* *C2N-CBF-P* *C2N-CBV-P*

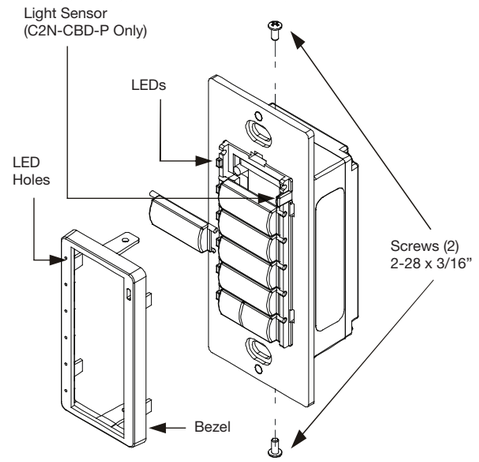
Assemble the Keypad

NOTE: The C2N-CBD-P-KP comes pre-assembled with either **ON** and **OFF** buttons or **SCENE 1** to **4**, **UP**, **DOWN**, and **OFF** buttons. The devices do not come with extra button caps.

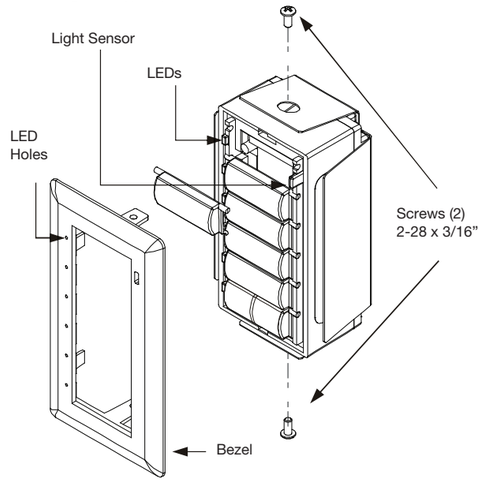
Attach the buttons to the keypad.

1. Arrange the button caps in position on the rear housing assembly according to the program plan.
2. Carefully position the bezel over the button caps on the rear housing assembly.
3. Install and tighten the two supplied #2-28 x 3/16" screws.
4. Press and release each button to ensure that the button caps move freely.

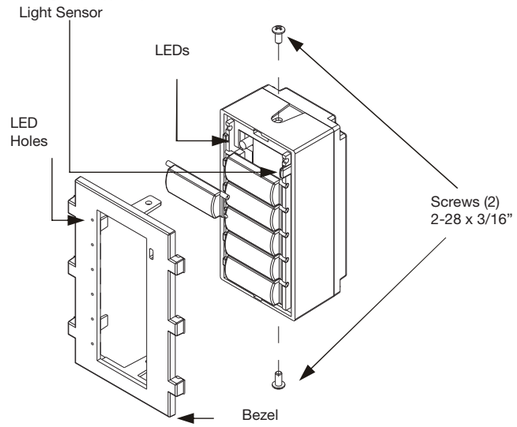
Assembling the Keypad (C2N-CBD-P Shown)



Assembling the Keypad (C2N-CBF-P Shown)



Assembling the Keypad (C2N-CBV-P Shown)



Hardware Hookup

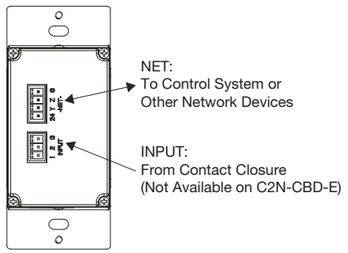
CAUTION: Turn the Cresnet® system power off before making connections. Do not turn the system power on until the device is fully installed in the mounting surface.

When making terminal block connections, strip the ends of the wires approximately 1/4 in (6 mm). Use care to avoid nicking the conductors. Twist together the ends of the wires that share a connection. Apply solder only to the ends of the twisted wires. Avoid tinning too far up the wires or the end becomes brittle.

Make connections to the NET and INPUT ports.

- Using the supplied 4-pin connector, connect the Cresnet cable to the NET port of the keypad.
- Using the supplied 3-pin connector (all except C2N-CBD-E), connect the contact closure input cable to the INPUT port of the keypad.

Hardware Hookup



Installation

NOTES: Observe the following points.

- This product should be installed and used in accordance with appropriate electrical codes and regulations.
- This product should be installed by a qualified electrician.

NOTE: Before using the C2N-CBD/CBF/CBV, ensure the device is using the latest firmware. Check for the latest firmware for the C2N-CBD/CBF/CBV at www.crestron.com/firmware. Firmware is loaded onto the device using Crestron Toolbox™.

The C2N-CBD/CBF/CBV can be installed into an electrical box (C2N-CBD-P, C2N-CBD-P-KP, C2N-CBD-E), flush mounted (C2N-CBF-P), or installed into a Vimar box (C2N-CBV-P). Refer to the appropriate procedure below.

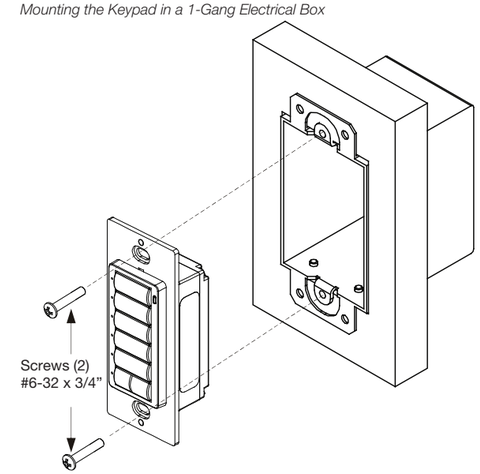
Electrical Box Installation

After the Cresnet network wiring has been installed and verified, use the following procedure to install the keypad in a standard 1-gang electrical box.

1. Holding the keypad with the LEDs on the left, place it in the electrical box.
2. Secure the keypad using the included #6-32 x 3/4" screws.

   CAUTION: Excess wire pinched between the keypad and electrical box could short out. Make sure all excess wire is completely inside the electrical box and not between the box and the keypad.

Mounting the Keypad in a 1-Gang Electrical Box



3. Attach the desired decorator style faceplate (not supplied).
4. Turn the Cresnet system power on.

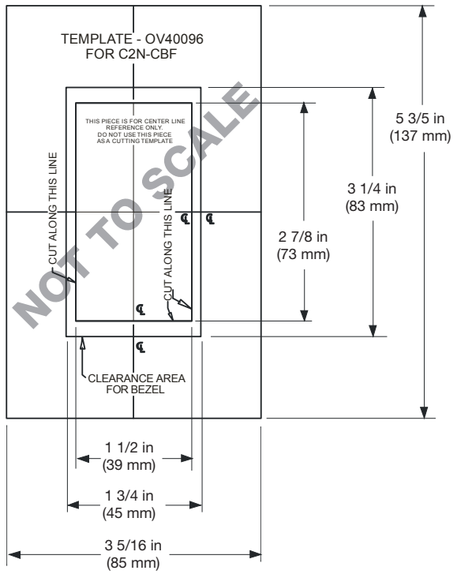
Flush Mount Installation

After the Cresnet network wiring has been installed and verified, install the keypad in the prepared hole.

1. Use the supplied template as a guide to cut the mounting hole for the C2N-CBF-P. Ensure that the template is level and properly located on the wall. The keypad does not offer a means of adjusting the keypad in the opening. The following illustration (not to scale) shows the dimensions of the cutout template.

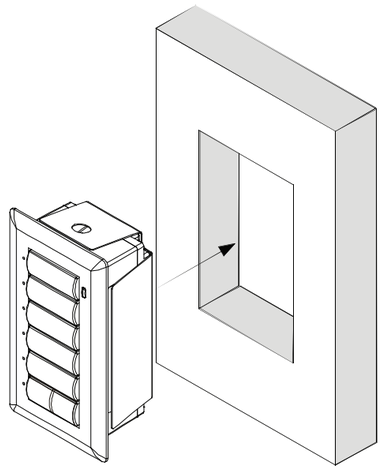
NOTE: Be very careful when cutting the hole. There are no adjustments for alignment with the spring clamp. The optional MMK-G1-CBF-T Mud Ring Mount Kit for Cameo Flush Mount Keypads (sold separately) may be used if the cutout in the mounting surface is too large for the keypad.

Cutout Template (Not to Scale)



2. Holding the keypad with the LEDs on the left, place it in the hole. The spring clamp holds the keypad in position. Turn the Cresnet system power on.

Mounting the C2N-CBF Keypad



NOTE: If the keypad needs to be removed from the mounting surface, use a small flat-blade screwdriver to carefully pry the keypad away from the mounting surface. Without damaging the keypad or mounting surface, gently remove the keypad.

Vimar Mount Installation

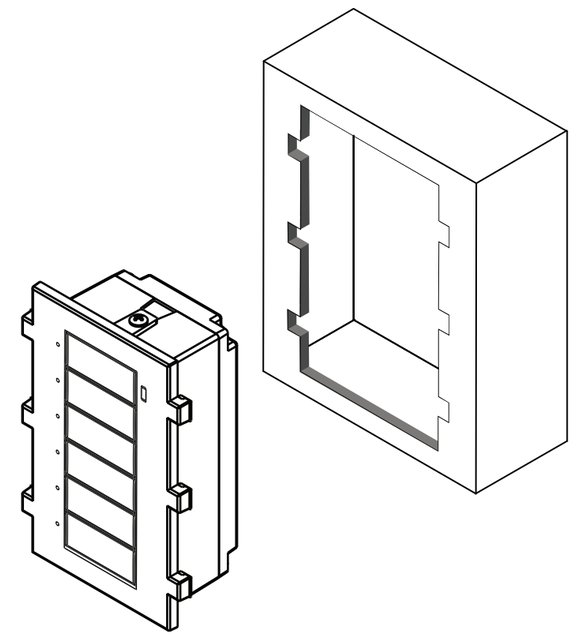
After the Cresnet network wiring has been installed and verified, install the keypad in the Vimar style electrical box.

NOTE: Ensure that Cresnet power is off until the keypad is fully installed.

Holding the keypad with the LEDs on the left, place it in the Vimar style electrical box. The keypad snaps into place. Turn the Cresnet system power on.

CAUTION: Excess wire pinched between the keypad and electrical box could short out. Make sure all excess wire is completely inside the electrical box and not between the box and the keypad.

Mounting the Keypad in a Vimar Style Electrical Box



Ambient Light Sensor Operation

The C2N-CBD-P, C2N-CBD-P-KP, C2N-CBF-P, and C2N-CBV-P keypads have an ambient light sensor that can be used to automatically configure the backlight to operate in either Day mode or Night mode.

Backlight operation is based on ambient light level and a programmed threshold. Presets based on the keypad color set the optimum backlight level for Day mode and Night mode.

When using presets, the following occurs:

- For light-colored keypads with dark engraving, the backlight turns on dim when in Night mode and off when in Day mode.
- For dark-colored keypads, the backlight turns on dim when in Night mode and on bright when in Day mode.

NOTE: Backlight levels can also be set manually.

The indicator LEDs automatically adjust their brightness based on ambient light, going bright when the keypad is well lit and going dim when the room is dark.

When two or more keypads are to be installed side by side, ensure that the backlights on all units are in sync. To do this, there are signals available on the programming symbol to allow one unit to act as the master backlight controller and the rest as slaves.

Refer to the Crestron Studio or SIMPL Windows help file for more information.

Troubleshooting

The following table provides corrective actions for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
The keypad does not function.	The wrong power supply is being used.	Use a Crestron power supply.
	The unit is not receiving power or it is receiving insufficient power.	Verify the cable plugged into the NET port is secure. Verify that the power supply is correct.
	There is a loose connection in the network.	Verify the cable plugged into the NET port is secure.
The keypad does not function. All six feedback LEDs are on low.	The wrong Net ID is being used.	Verify that the C2N-CBD/CBF/CBV's Net ID matches the Net ID in the software program.
The keypad does not function or does not function as expected. However, it reports on Cresnet at the proper Net ID.	The unit is not programmed correctly.	Use SIMPL Debugger to check the behavior when buttons are pressed. Revise and reload the program as needed to correct the behavior.

This product is Listed to applicable UL Standards and requirements by Underwriters Laboratories Inc.

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Federal Communications Commission (FCC) Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Industry Canada (IC) Compliance Statement

CAN ICES-3(A)/NMB-3(A)

The product warranty can be found at www.crestron.com/warranty.

The specific patents that cover Crestron products are listed at patents.crestron.com.

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